

IN THE CLAIMS

Please cancel original claims 1,2 and 8-11.

Claims 1-2 Cancelled.

3. (Original) A device for improving DFE performance, comprising:
  - an input which receives an output of a DFE;
  - an adaptive filter having an adaptive filter input and an adaptive filter output, the adaptive filter input coupled to the input; and
  - an output coupled to the adaptive filter output for supplying an output signal to a DDFSE trellis decoder, which output signal is the DFE output signal with a smaller whiter error than the error in the output of the DFE.
4. (Original) The device as claimed in claim 3, wherein the adaptive filter is adapted to receive a training sequence that adapts filter taps in the adaptive filter such that the adaptive filter acts to whiten the error in the output of the DFE.
5. (Original) The device as claimed in claim 4, wherein the adaptive filter further includes a LMS algorithm which is used to adapt the filter taps.

6. (Original) The device as claimed in claim 5, wherein the

$$\sum_{i=1}^{L_g} g_i^2 \leq P$$

adaptive filter further includes a device for comparing

where  $g_i$  is a filter tap and  $P$  is a power constraint imposed on the LMS algorithm to limit amplitude of the filter taps.

7. (Original) A method of improving DFE performance, comprising the steps of:

receiving an output signal from the DFE which includes

$\tilde{a}_k + e_k$ ;

adaptively filtering  $\tilde{a}_k + e_k$ ;

providing the adaptively filtered  $\tilde{a}_k + e_k$  to a DDFSE.

Claims 8-11 Cancelled.